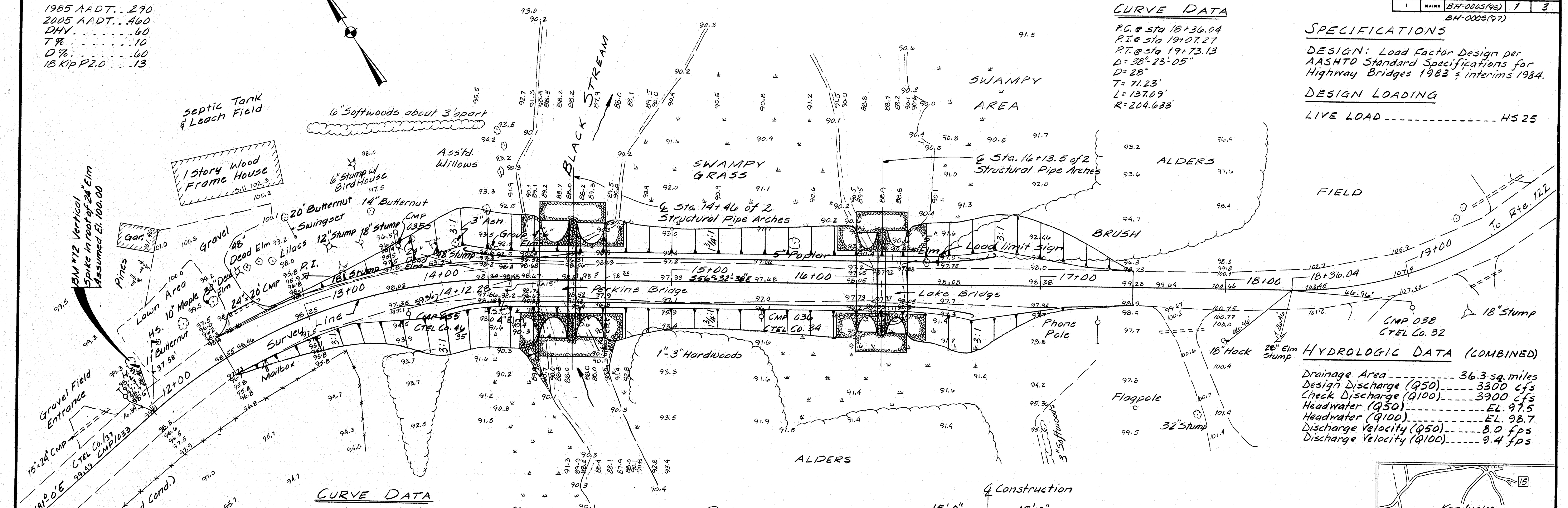
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BH-0005(98) BH-0005(97)	1	3

TRAFFIC DATA

1985 AADT...290
2005 AADT...460
DHV........60
T%..........10
D%..........60
18 Kip P2.0....13



CURVE DATA

P.C. @ Sta 18+36.04
P.I. @ Sta 19+07.27
P.T. @ Sta 19+73.13
Δ = 38°23'05"
D = 28°
T = 71.23'
L = 137.09'
R = 204.633'

CURVE DATA

P.C. @ Sta 12+00
P.I. @ Sta 13+11.28
P.T. @ Sta 14+12.28
Δ = 42°27'22"
D = 20°00'
T = 111.28'
L = 212.28'
R = 286.479'

PLAN

Scale in feet

SPECIFICATIONS

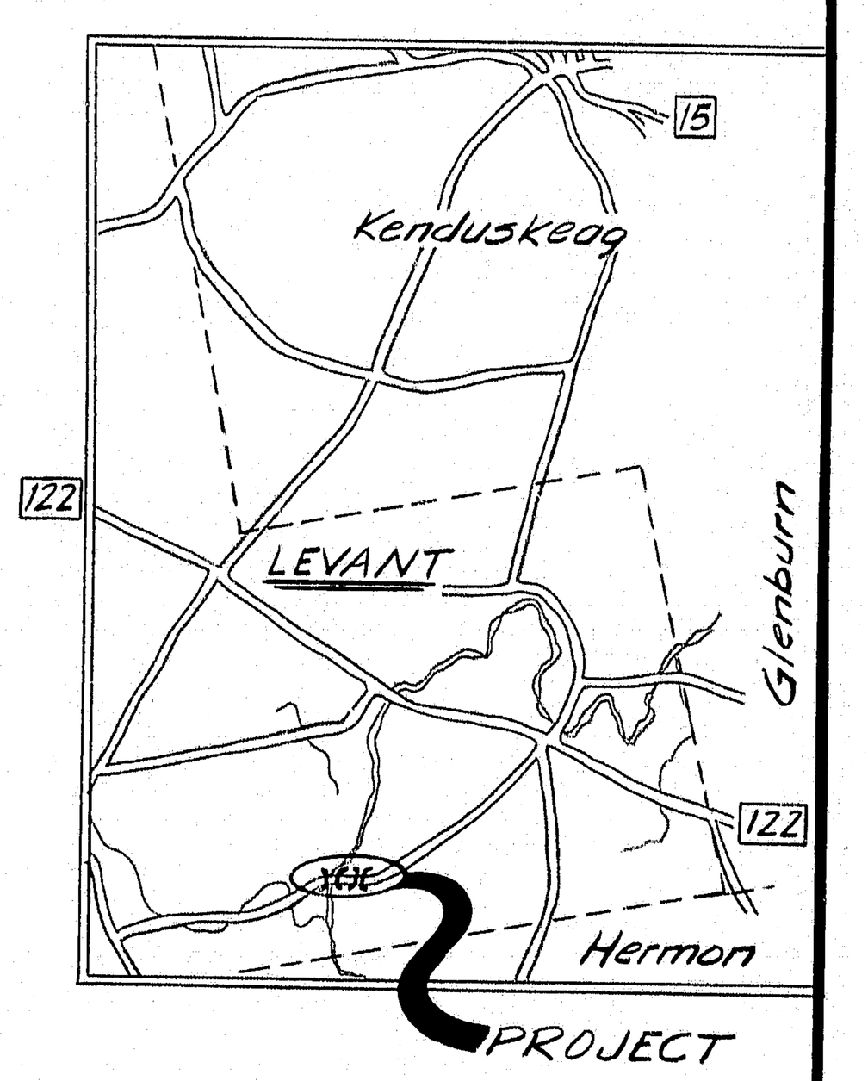
DESIGN: Load Factor Design per AASHTO Standard Specifications for Highway Bridges 1983 & interims 1984.

DESIGN LOADING

LIVE LOAD..........HS 25

HYDROLOGIC DATA (COMBINED)

Drainage Area..........36.3 sq. miles
Design Discharge (Q50)..........3300 cfs
Check Discharge (Q100)..........3900 cfs
Headwater (Q50)..........EL. 97.5
Headwater (Q100)..........EL. 98.7
Discharge Velocity (Q50)..........8.0 fps
Discharge Velocity (Q100)..........9.4 fps



LOCATION MAP

SURVEY NOTES FOR PERKINS BRIDGE

APPROACHES: Gravel, Good Condition

SUPERSTRUCTURE: 19'-6" Face to Face of traffic type rail, 7-21" Steel stringers w/ 3½" corrugated steel decking. Stringers need paint. Decking in fair condition

SUBSTRUCTURE: Partially mortared granite, good condition

STREAM: Rocky streambed, No visible signs of ledge. High water by local resident has been 2' below bottom flange.

UTILITIES: Central Me Power & Continental Phone.

SURVEY NOTES FOR LAKE BRIDGE

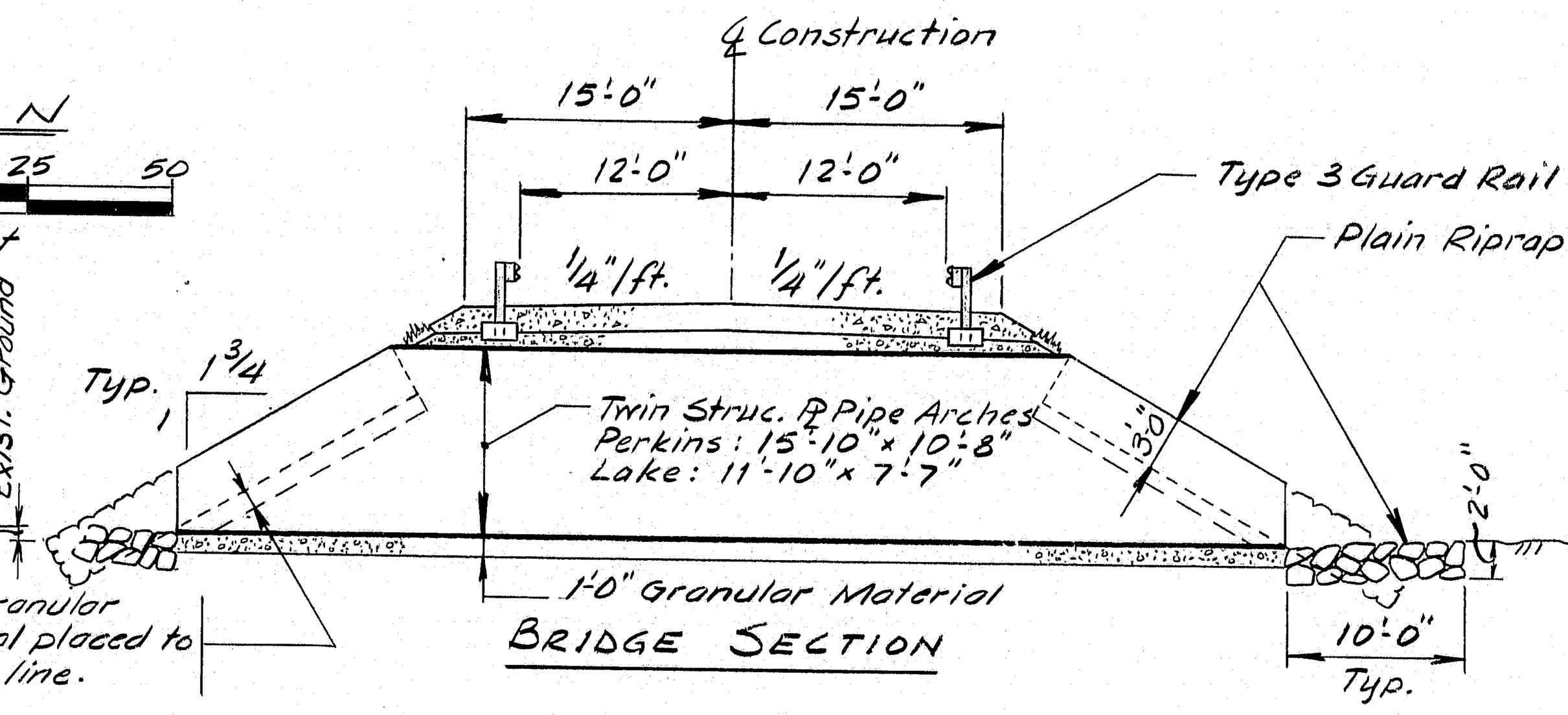
APPROACHES: Gravel, Good condition

SUPERSTRUCTURE: 19'-6" Face to Face of traffic rail, 7-14" Steel Stringers w/ corrugated steel decking. All in poor condition.

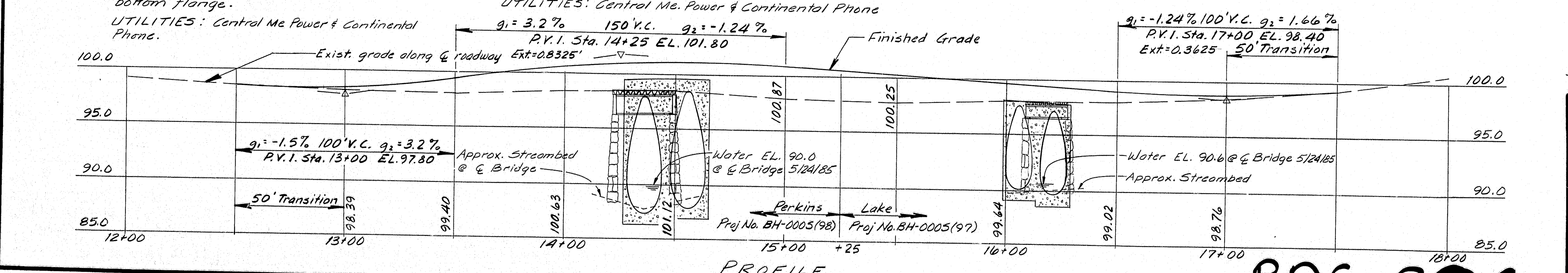
SUBSTRUCTURE: Partially mortared granite abutments, Good Condition.

STREAM: Overflow area for Black Stream, stagnant water

UTILITIES: Central Me. Power & Continental Phone



BRIDGE SECTION



PROFILE

Survey Book No. 9991
Bridge Nos. Perkins 6133, Lake 3359

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PERKINS & LAKE BRIDGES
OVER
BLACK STREAM
IN THE TOWN OF
LEVANT, PENOBSCOT COUNTY

GENERAL PLAN

SHEET 1 OF 3 AUGUSTA, MAINE June 1985

PLANS		BY	DATE
PROJECT DESIGN ENGINEER			6/85
DESIGN - DETAILED		LSB	2/86
CHECKED			
REVISIONS		ATA	
FIELD CHANGES			

Plotted by LSB

R96-328

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BH-0005(98)	2	3

BH-0005(97)

NOTES

1. A Structural Plate Pipe Arches are required with ℄'s at stations 14+46 and 16+13.5. The alternates are as follows:

   Bridge @ ℄ 14+46
   Steel Alternate: 2-190 inch span x 128 inch rise pipes. Top plates shall be 0.138 inch thick and the bottom and corner plates shall be 0.188 inch thick.

   Aluminum Alternate: 2-201 inch span x 128 inch rise pipes. All plates shall be 0.100 inch thick.

   Bridge @ ℄ 16+13.5
   Steel Alternate: 2-142 inch span x 91 inch rise pipes. Top plates shall be 0.138 inch thick and the bottom and corner plates shall be 0.188 inch thick.

   Aluminum Alternate: 2-151 inch span x 89 inch rise pipes. All plates shall be 0.100 inch thick.

2. Both bridges will be closed to traffic during construction.

3. The existing Perkins' & Lake bridges shall be entirely removed.

4. The ends of the pipe arches shall be cut on a 1¾ : 1 bevel.

5. The flowline elevations shown are approximate. The actual elevations shall be about 6" below natural streambed for pipe arches "A & D" and at streambed for pipe arches "B & C." A minimum cover of 26" over the Perkins bridges and 19" over the Lake bridges must be maintained over the pipe arch if an adjustment is required.

6. Install one guardrail delineator post at each guardrail end.

7. Guardrail posts interferring with the pipe arch shall be cut and cast into concrete blocks.

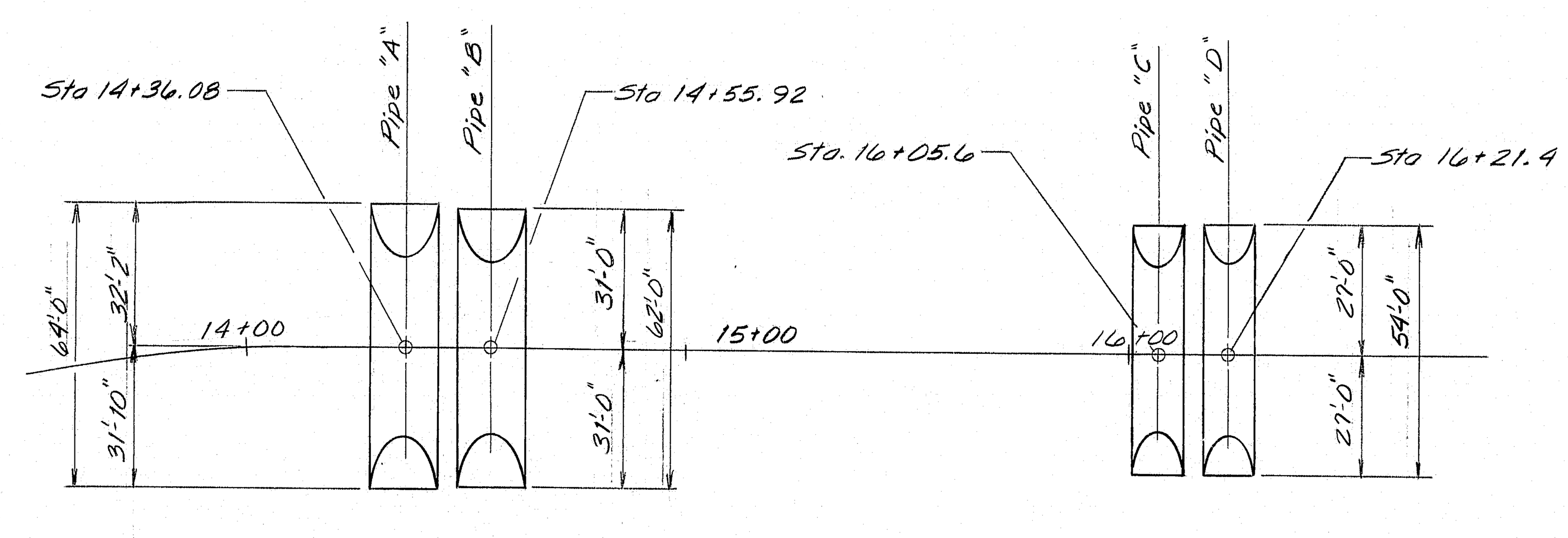
8. The pipe arch may be assembled other than in its final position and lifted into place. Dewatering will not be required; however, the bedding material shall be placed uniformly and the pipe arch shall be moved back and forth longitudinally to shape and compact it prior to placing the pipe arch in its final position.

9. Granular material may be omitted under the pipe arch if the existing material is granular and suitable.

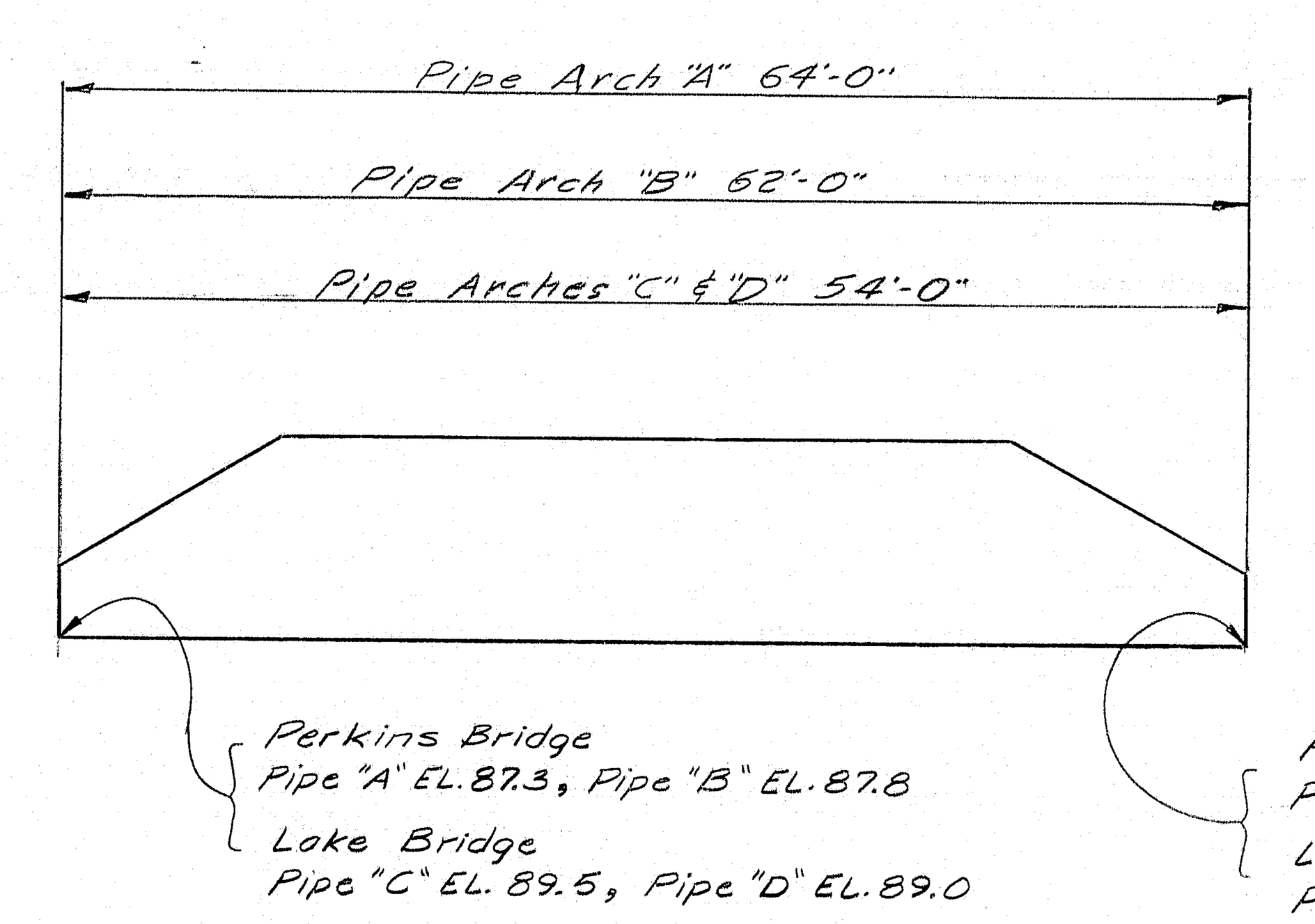
10. Granular backfill material shall be deposited evenly on both sides of the pipe arch in layers not to exceed twelve inches in depth.

11. Riprap adjacent to the pipe arch shall be carefully placed so as not to damage the pipe arch and so that the finished slope will match the ends of the pipe arch.

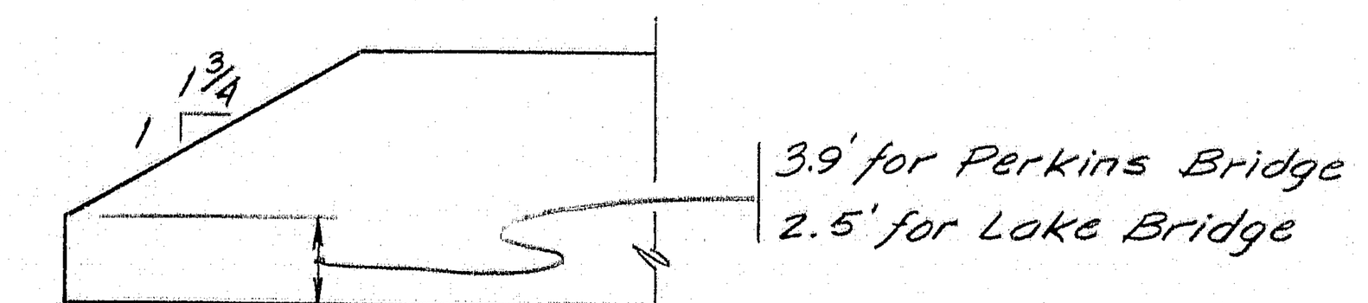
12. End reinforcement devices (for the Alum. Alt.) shall be of Alum. and shall be of sufficient strength to provide a minimum section modulus about an axis perpendicular to the center of the pipe of 1.10 $in.^3$ per foot of pipe circumference. Maximum spacing of the devices shall be 5'-6". Attachment to the pipe shall be with ¾" diameter galvanized steel bolts. Section properties and details of the devices and the method of attachment shall be submitted to the Engineer for approval.



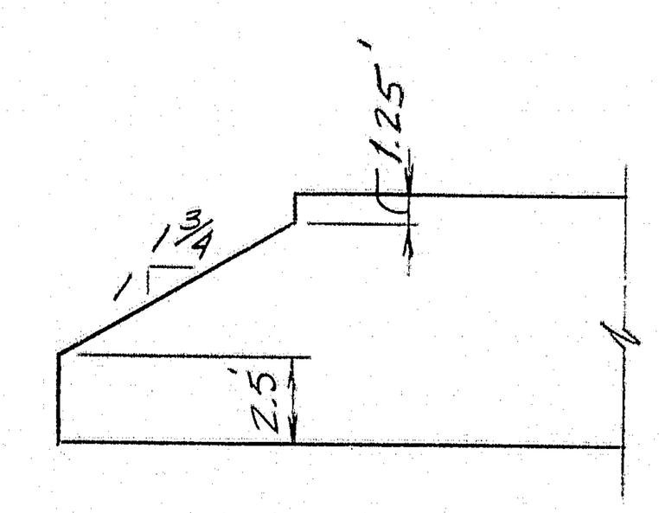
LAYOUT



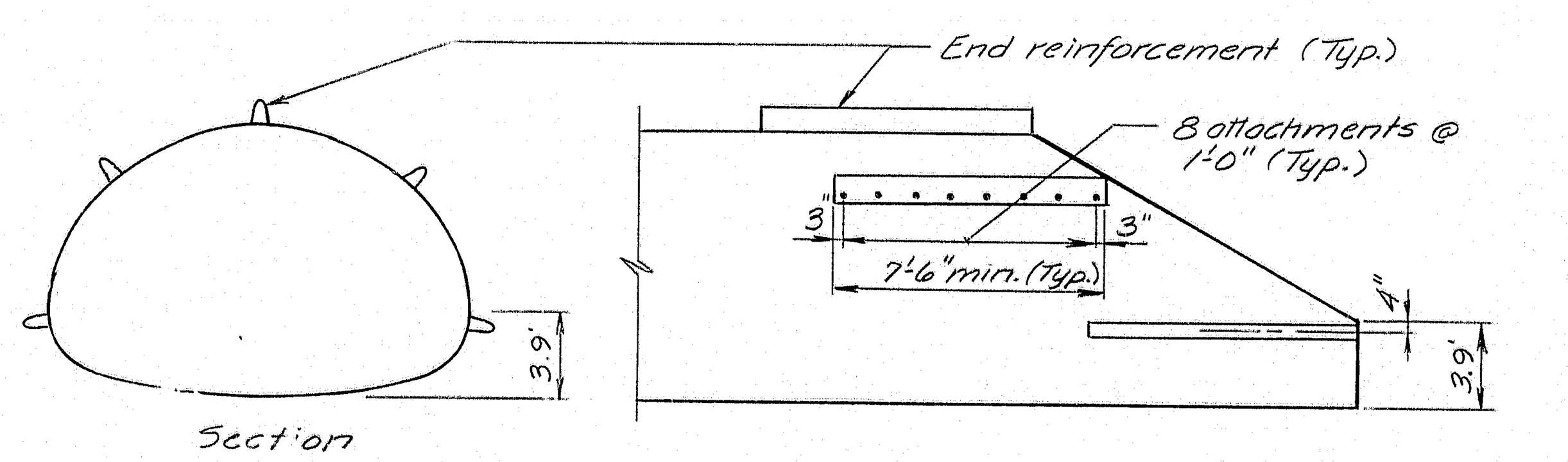
LENGTH OF PIPE ARCHES & FLOWLINES



STEEL ALTERNATE



LAKE BRIDGE ALUMINUM ALTERNATE



PERKINS BRIDGE ALUMINUM ALTERNATE

END DETAILS FOR ALL PIPE ARCHES

PROJECT DESIGN ENGINEER	BY		DATE
PLANS DESIGN - DETAILED	LRT	LSB	1/86
CHECKED	RTA		2-86
REVISIONS			
FIELD CHANGES			

BRUNING 44-132 45710-1

R96-329

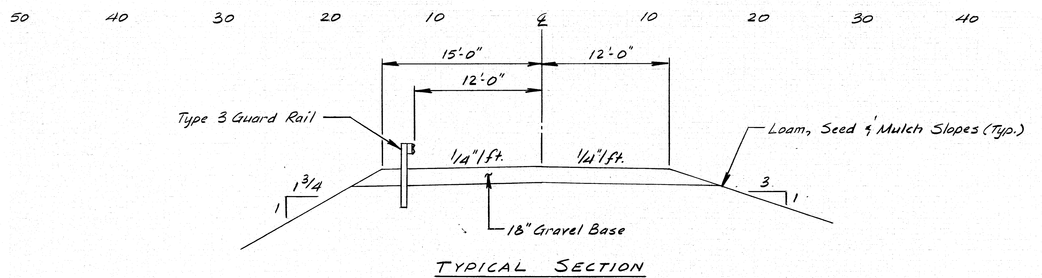
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PERKINS & LAKE BRIDGES
OVER
BLACK STREAM
IN THE TOWN OF
LEVANT, PENOBSCOT COUNTY

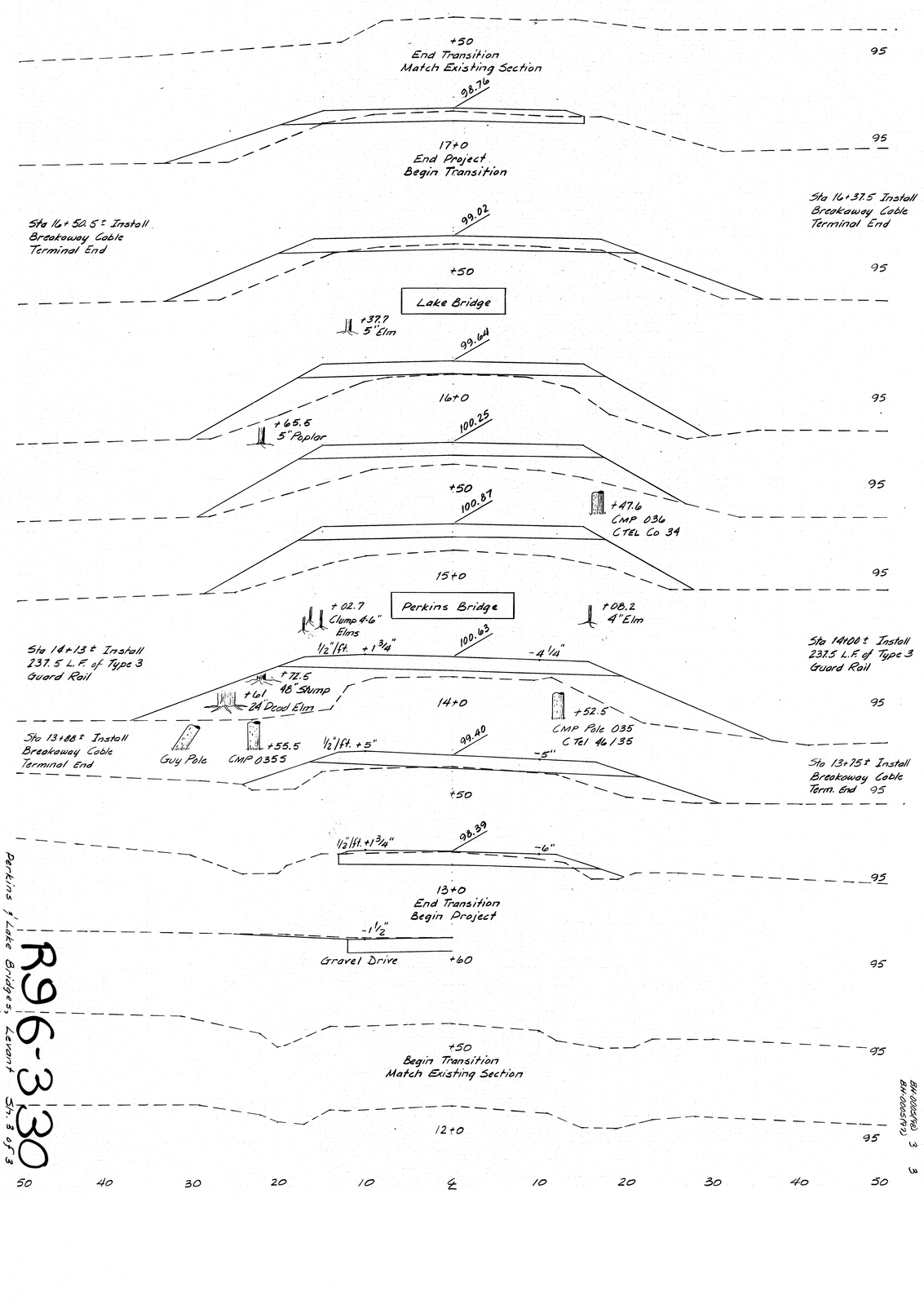
NOTES & MISC. DETAILS

SHEET 2 OF 3 AUGUSTA, MAINE

Revised 11-83
Revised 11-83



TYPICAL SECTION



Perkins & Lake Bridges, Levant

R96-330

Sh. 3 of 3

BH.0005(76) 3 3
BH.0005(79)